



VELKOMMEN TIL CCS-WORKSHOP!

Finansiering og risikostyring af CCS-
projekter

Axcelfuture, 2. februar 2023

DAGSORDEN

Introduktion:

Finn Lauritzen, Axcelfuture

CCS-finansiering – muligheder og udfordringer:

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Jonas Kofoed Larsen, AIP

Andreas Thornit, Danmarks Eksport- og Investeringsfond

Morten Poulsen, Evida

Muligheder for EU-støtte:

Christian Jussen, Implement Consulting

David Mora and Ulrik Jacobsen, Implement Consulting

Anders Grynnerup, PWC

Diskussion

Lidt vin!

FINANSIERING AF CCS ER ALFA OG OMEGA

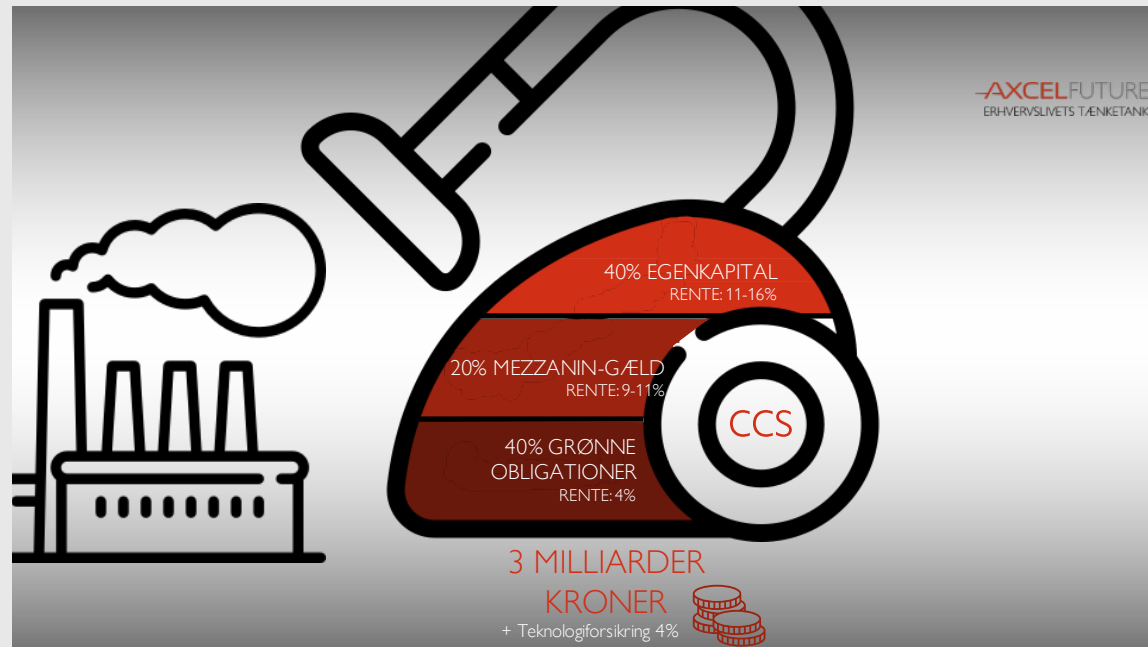
CCS-projekterne indebærer mange risici, især i starten
Finansieringen er blevet dyrere pga stigende rente

Vigtigste risici:

- konstruktions- og teknologirisici
- risiko for driftsproblemer og omkostningsstigninger
- risiko for stigende energipriser
- risiko for faldende CO₂-præmie
- risiko for problemer med transport og lagring
- risici ift varmeaftag
- langsigtet lagerrisiko
- politiske risici
- modpartsrisici/virksomhedsspecifikke risici

Samlet: er risiciene større end KEFM tror?

REGNEEKSEMPEL FOR TÆNKT PROJEKT MED FANGST AF 1 MTPA



Aktivitet	Investering, mio. kr.	Afskrivning, år	WACC efter skat, pct. pa.	Beta egenkapital	Capex, kr/ton	Opex, kr/ton	Totex, kr/ton
Fangst, konkurrenceudsatte virksomheder	3.000	20	8	2,3	310 (290-330)	200-400	490-730
Fangst, forsyninger	3.000	20	6,5	2,3	272 (250-290)	200-400	450-690
Transport	*	50	3,5	-	75-175	25-145	100-320

KONKLUSION: CCS KAN FUNGERE UDEN SUBSIDIER – MEN FØRST OM NOGLE ÅR

Aktivitet	Omkostninger, kr/ton CO2	Afhænger bl.a. af:
Fangst	450-730	Skala, energiomkostninger, varmeafdrag mv., læring
Transport	100-320	Skala, transportmetode (rør-skib ea., hvor rør er billigst)
Lagring	100-450	Lagring onshore er væsentligt billigere end offshore
I alt	650-1500	
Sparet afgift, kvote-omfattede virksomheder	825-1125	825 kr i 2025 stigende til 1125 kr i 2030
Sparet afgift, mineralogiske virksomheder	850-875	850 kr i 2025 stigende til 875 kr i 2030
Sparet afgift, biogene udledere	?	Politiske beslutninger om negativ afgift og kvotepris på biogen CO2

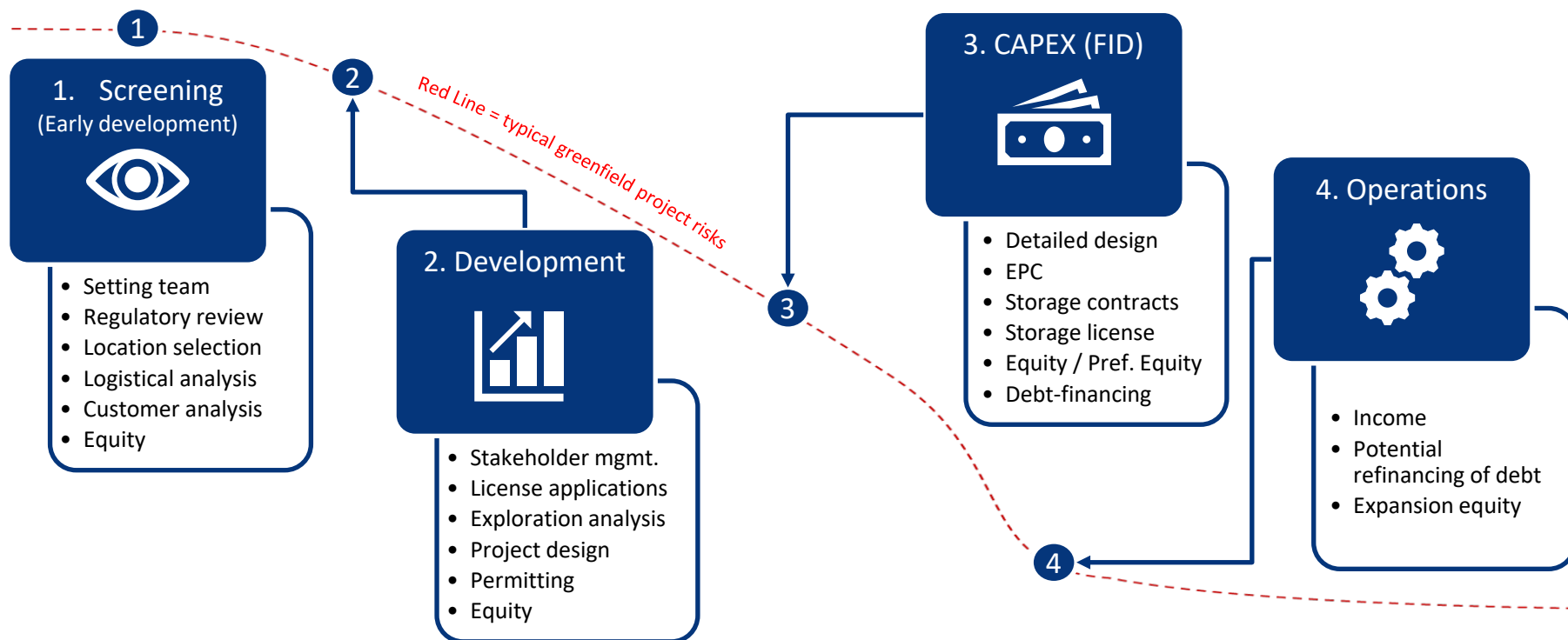
Financing of CCS projects

CCS Alliancen

2. February 2023

Confidential – Do Not Distribute

Capital formation phases of CCS projects



Capital characteristics and investment pre-requisites (1/2)

1. Screening – Early development

RISK LEVEL



CAPITAL NEED



CAPITAL FLEXIBILITY



Potential investors / funding:

Corporate Resources

Wealthy Individuals

Due diligence focus:

Business model concept

Regulatory setting

Capable team

2. Project development

RISK LEVEL



CAPITAL NEED



CAPITAL FLEXIBILITY



Potential investors / funding:

Grants

Wealthy Individuals

Venture Capital

Infrastructure Funds

Industry Players

Due diligence focus:

License and permitting

Customer engagements

Expected economics

Capital characteristics and investment pre-requisites (2/2)

3. CAPEX funding - FID

RISK LEVEL

CAPITAL NEED

CAPITAL FLEXIBILITY



Potential investors / funding:

Institutional Investors

Infrastructure Funds

Industry Players

IFIs

Banks

Due diligence focus:

Technical design

Customer commitments

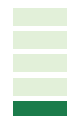
Detailed economics

4. Operational expenses

RISK LEVEL

CAPITAL NEED

CAPITAL FLEXIBILITY



Potential investors / funding:

Income

Infrastructure Funds

Banks

Refinancing

Due diligence focus:

Operational track record

Expansion opportunities



Cash flow projections

Funding challenges in CCS projects at different stages

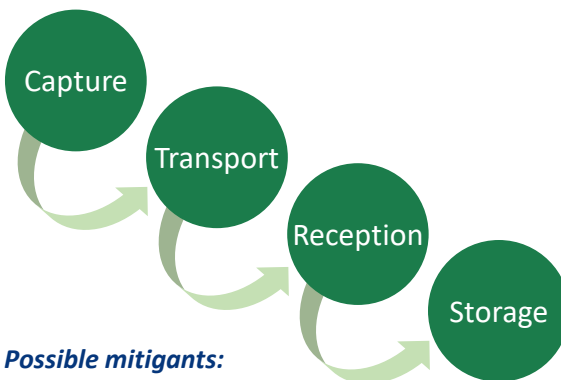
New market for many investors






Possible mitigants:

-  **Subsoil experience (O&G)**
-  **Regulatory stability and visibility**

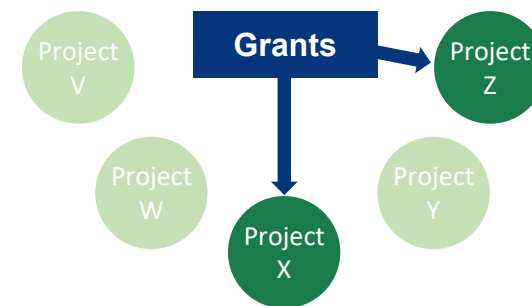
Split supply chain





Possible mitigants:

-  **Customer commitments**
-  **Capture equipment subsidies**
-  **Shipping investor presence**

Market development paths



Possible mitigants:

-  **Reduce “cherry-picking” of projects via grant issuance**
-  **Showcase attractive economics**

AIP Management P/S
Rosenborggade 1B
DK-1130 Copenhagen K

Axcelfuture, 2 February 2023

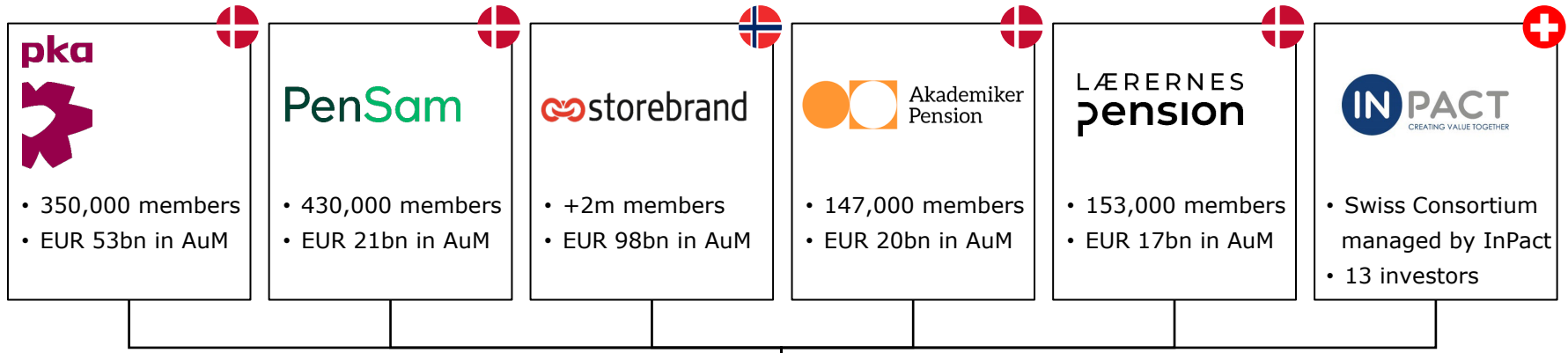
CCS Alliance workshop – Financing and risk management of CCS projects



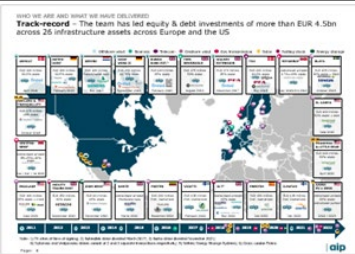
Speaker: Jonas Kofoed Larsen



WHO WE ARE

AIP is the dedicated infrastructure investment manager for PKA, PenSam, Storebrand, AkademikerPension, Lærernes Pension and a consortium of Swiss investors and currently has EUR 4.5 billion in assets under management



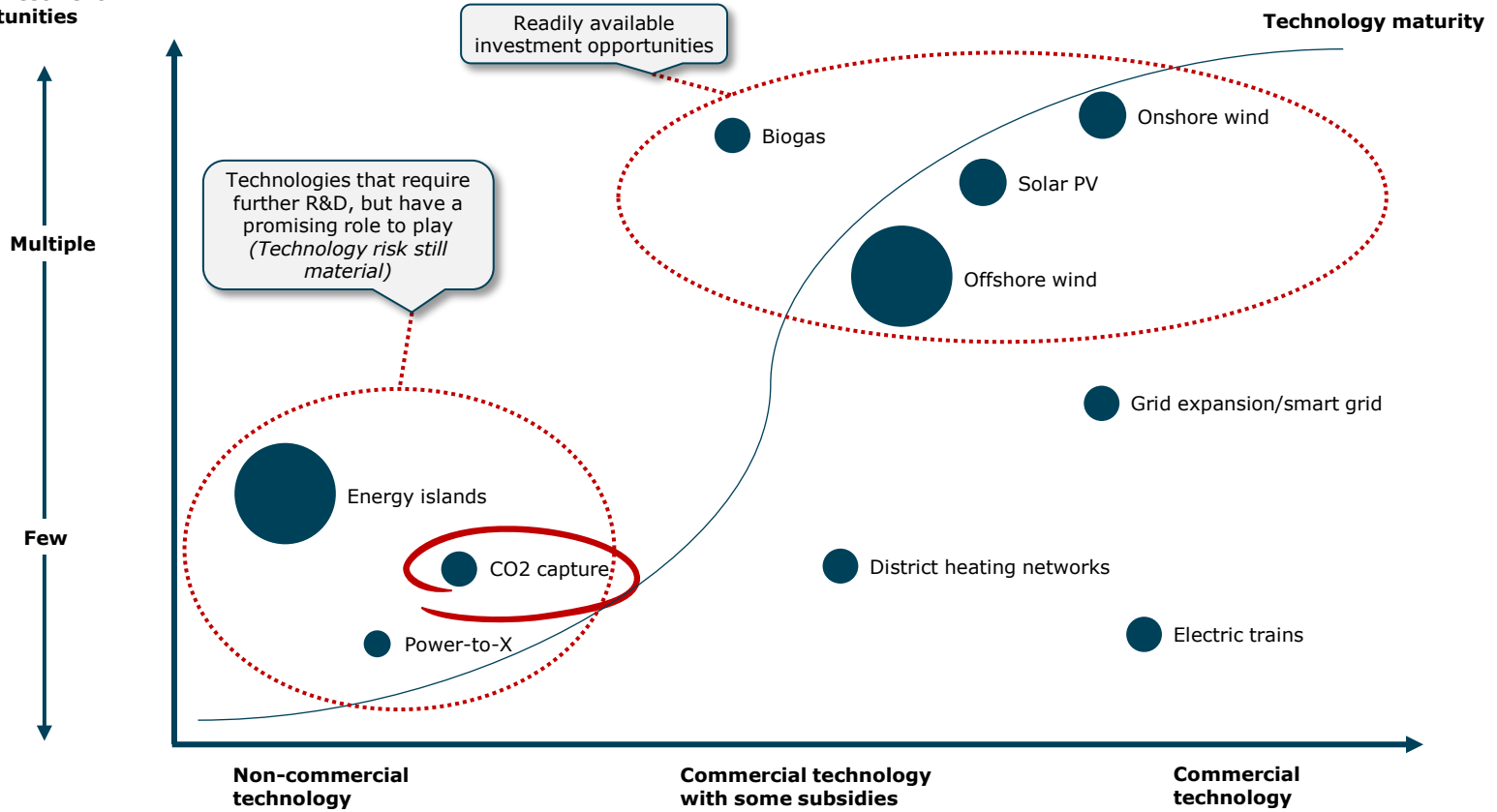
 	Geographic focus Europe North America	Sector focus Energy, utilities, transport, telecom	Annual commitment EUR 1 billion	Current AuM EUR 4.5 billion
	<ul style="list-style-type: none"> • Direct infrastructure investment platform for institutional investors • Established in 2018 as a spin-out of PKA AIP originally created in 2012 • Partnership 50% owned by partners and 50% by investors • Additional EUR 4.5 billion committed to AIP Infrastructure II, with an investment period of 3-4 years and focus on US onshore wind/solar, global offshore wind, European onshore wind/solar, and electrification of transport 			 <p>Track-record - The team has led equity & debt investments of more than EUR 4.5bn across 26 infrastructure assets across Europe and the US</p>

Is CCS projects bankable ? Yes, but at what terms... Project financing should be based on robust, long-term and **highly predictable** cash flows...

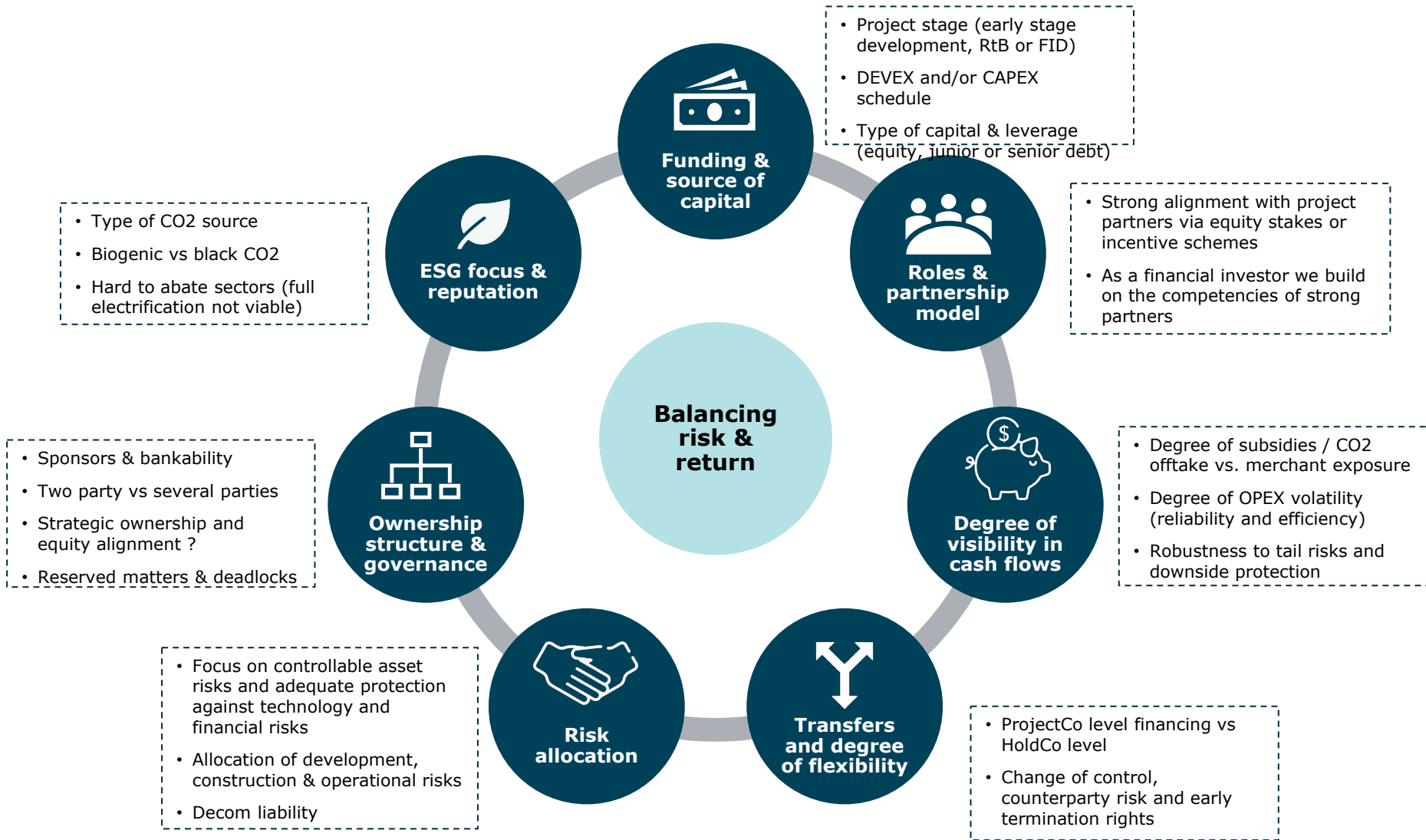
Maturity curve: CCS is still in the early phase of the technology maturity curve with only few investment opportunities available

● Size indicates estimated investment potential

of investment opportunities

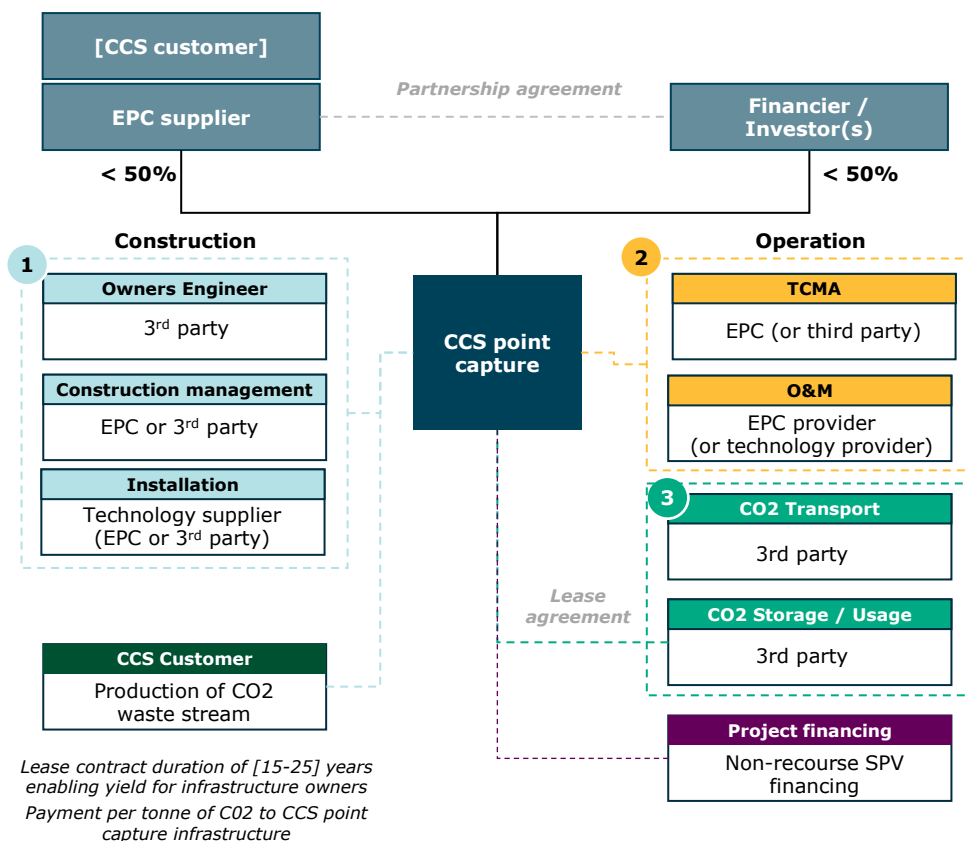


Risk reward balancing: Understanding the CCS project complexities and ensuring proper protection for financing providers is central for determining the risk & return



Potential structure on Carbon Capture facility: Preliminary illustrative structure

Simplified investment structure and contractual setup



Commentary


- 1 Construction**
 - Construction managed by an owners engineer or inhouse by the EPC provider
 - A turnkey EPC contract from experienced technology provider for delivery, installation, connection and commissioning of CCS point capture facility and supply contract for connecting transport infrastructure
 - EPC wrap backed by appropriate credit support covering the full EPC cost
- 2 Operation**
 - Technical and commercial management agreement from EPC or third party until decommissioning
 - Full operation and maintenance wrap of the CCS point capture facility for up to [20] years with availability guarantee with sufficiently incentivized LD levels
 - Risk allocation may be sold to offtakers rather than taking full value-chain risk
- 3 Offtake**
 - Lease or partnership agreement with offtakers of CO2 for transport by ship (or pipeline) and utilization or permanent storage
 - Full risk allocation of the CO2 transfer at the site (or full value chain risk subject to subsidies)

Note: If technology supplier and EPC provider is different companies, work and responsibilities need to be clearly defined
Source: AIP

RISK MANAGEMENT


The AIP approach to risks: An integrated workstream throughout investment process both pre and post investment using well-known principles and metrics


Overview of focus points, processes and framework to mitigate risk factors



Alternative Investment Fund Manager


- AIP Management is a registered AIFM supervised by the Danish FSA,
- Requiring proper risk management policies, frameworks and management reporting tools is put in place






Portfolio guidelines and limitations

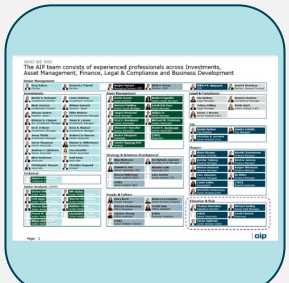
- Risks are identified, documented, measured and monitored for all assets
- Ensure funds are within portfolio guidelines and limitations set out in the applicable LPA's






Inhouse risk management team


- Acts as an advisor to the investment team but with a clear organizational split ensuring adequate provisions






Integration of risk return framework in investment process


- Help differentiating between investment opportunities on a risk-adjusted basis
- Chase investments exhibiting above average return on a relative risk-adjusted basis





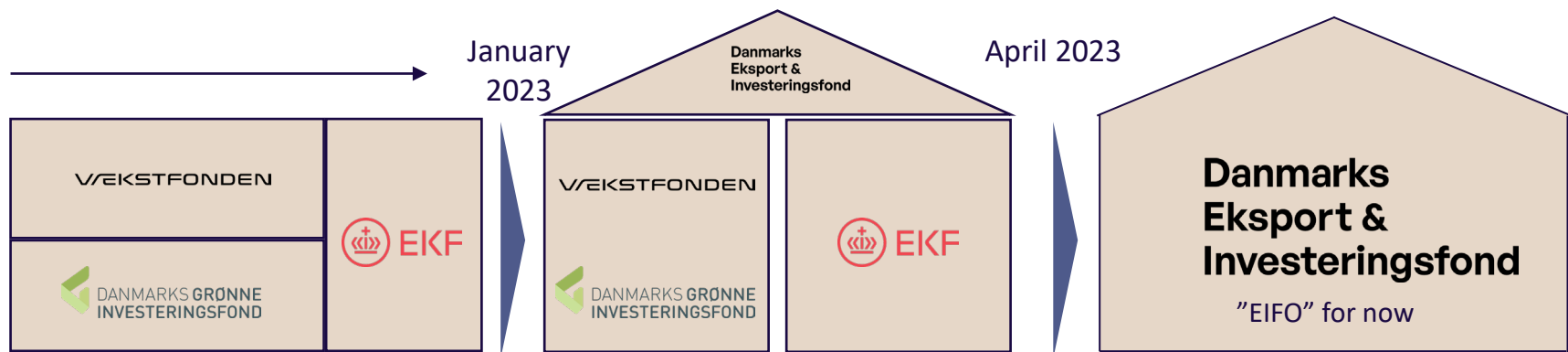
Monitoring risks in asset management

- Ongoing update of risk register and monitoring of key risks as part of quarterly valuation and asset reporting
- Ultimate purpose to mitigate key risks before they occur and protect our investments





Denmark's Export and Investment Fund



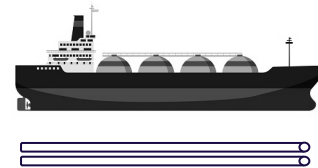
EIFO was established with a clear **mandate**:

- Make Denmark prosper by supporting investments in Denmark as well as Danish exports
- Good business and the green transition go hand in hand
- Large amounts of capital dedicated to PtX and CCUS as well as risk capital under Eksportpakke II
- Supporting PtX and CCUS is one of EIFO's license to operate and is a strategic must-win battle

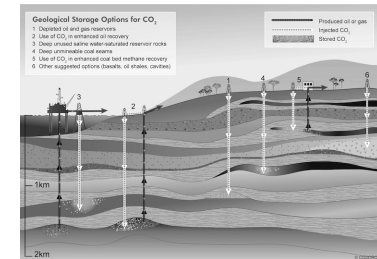
Credit risk perspectives on CO₂ infrastructure financing



Capture / Emitters



CO₂ Logistics



Sequestration

Economic rationale

Subsidies / Tax mitigation / EU-ETS

Profitable charter/transport agreement with emitter(s)

Profitable offtake agreement with emitter(s)

Credit considerations

Ability to manage full CO₂ value chain (certification risk)

CC assets does not generate stand alone earnings

Price volatility from EU-ETS / CO₂ tax

CC equipment integrated in existing assets infrastructure

CO₂ from operations -> Business risk

Separate earnings from individual CO₂ assets

Credit quality of emitter (passthrough of credit risk)

Interdependencies from CO₂ value chain

Contract features ("take-or-pay" / availability fee or are business risks passed through)

High switching cost / single purpose assets

Technical and operational risk (geological / well management / vessel risk)

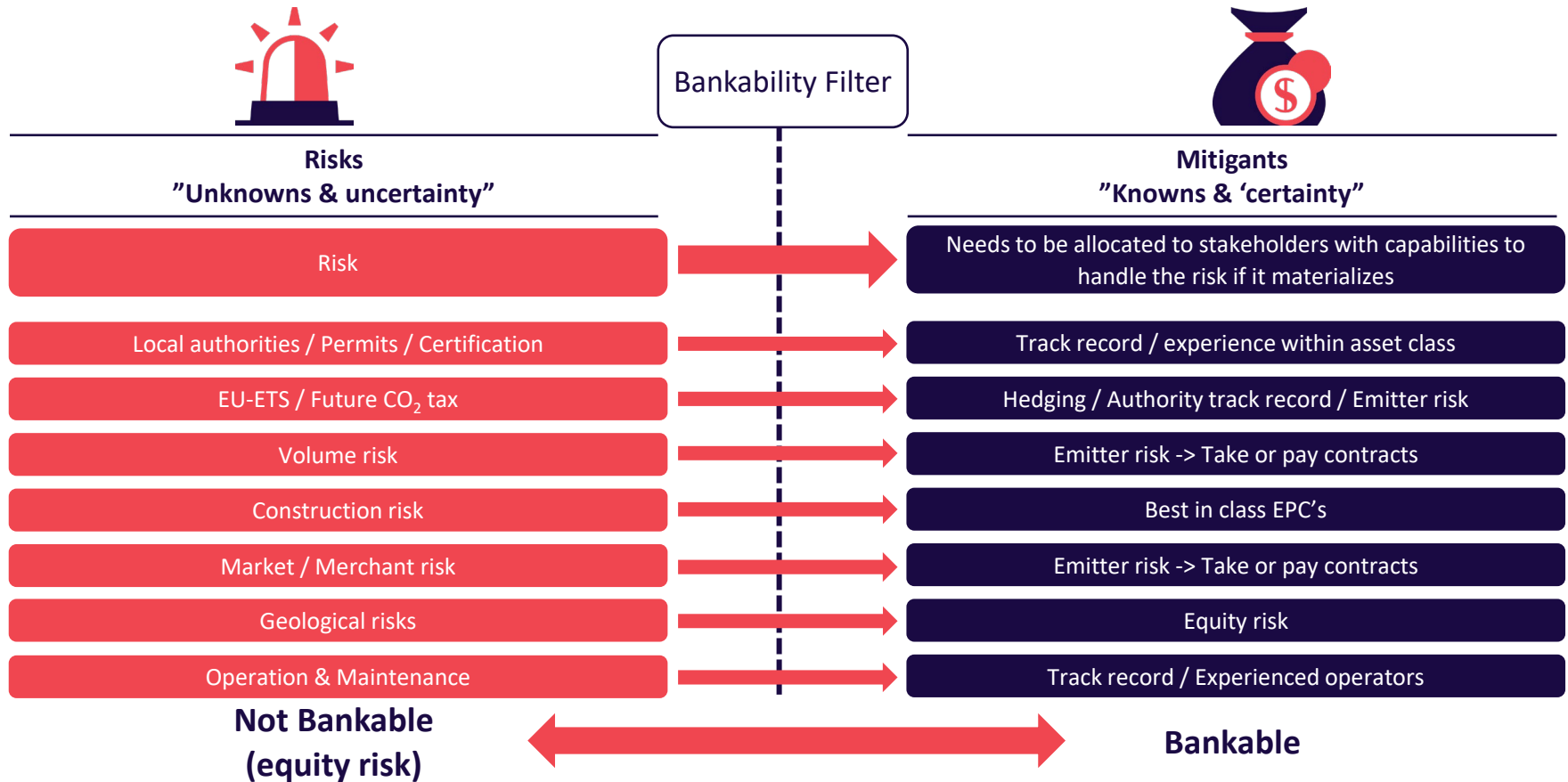
Financing implications

Strong balance sheets with high credit quality required (Corporate Financing)

Stand alone financing eligibility (Project Finance) but key risks must be mitigated through fair risk allocation



Bankability of CO₂ infrastructure (general and not exhaustive)



Wrap-up and key takeaways

- EIFO wish to support CCUS in DK and assist DK companies with projects abroad
- Strong balance sheets are needed for emitters, but also require a holistic approach to risk allocation across the CCUS value chain
- We believe that CO₂ capture equipment would typically be financed on balance sheets (Corporate Financing) while CCUS infrastructure could be eligible for separate finance structures (Project Finance) pending risk allocation and mitigants
- Project Financing of CCUS infrastructure requires bullet-proof contracts of long duration with strong counterparts and risks need to be allocated to the parties most equipped to manage them
- Capital structures may need to be more conservative than mature energy assets (wind) due to industry maturity and untested risk models





Connect with the New Energy Origination team



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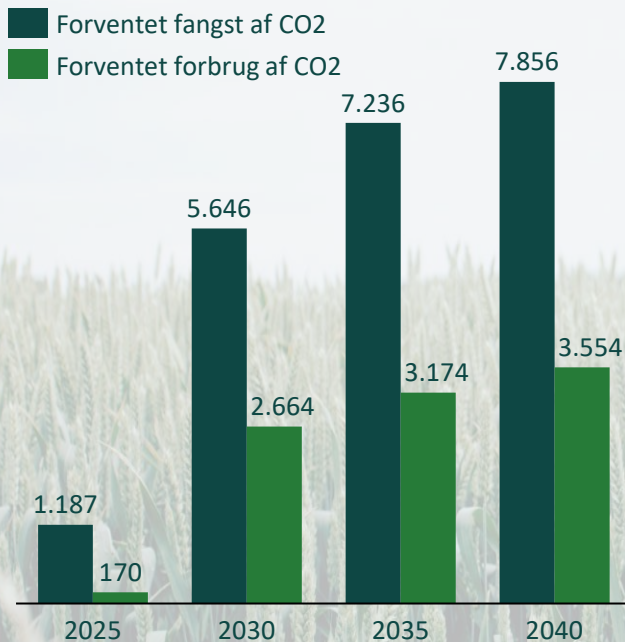
A person wearing a high-visibility vest with the 'evida' logo is seen from behind, working on industrial machinery. A white, branching network diagram is overlaid on the left side of the image. The background is a dark, teal-tinted photograph of industrial equipment.

KORTLÆGNING AF BEHOVET FOR RØRFØRT CO₂-INFRASTRUKTUR

Morten Poulsen | Head of PtX
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Forventet CO₂ fangst og forbrug

(tusind tons CO₂, N=24)



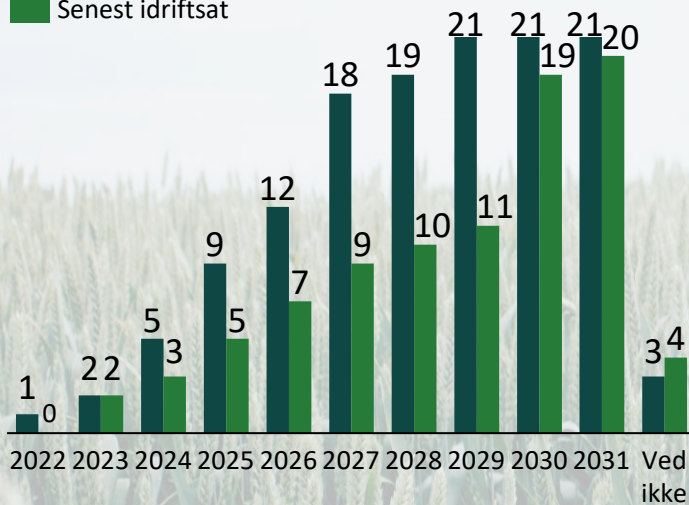
FORVENTET CO₂ FANGST OG FORBRUG BASERET PÅ NY MARKEDSUNDERSØGELSE

- Den forventede fangst i Danmark overgår anvendelsesbehov
- Fra 2030 til 2040 forventes en årlig vækst i mængden af fanget og anvendt CO₂ på ca. 3 pct. om året
- Tallene er en øjeblikkelig indikation og er forbundet med usikkerhed, men viser et potentiale i Danmark for både fangst, lagring og anvendelse

Alle deltagende aktørers tidligste og seneste idriftsættelse

(antal aktører, N=24)

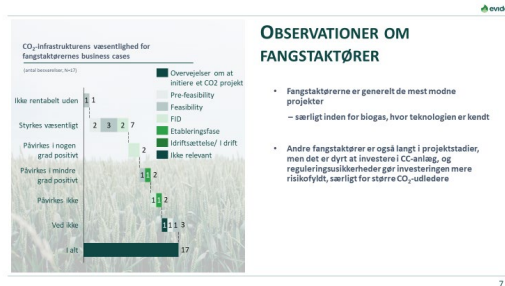
■ Tidligst idriftsæt
■ Senest idriftsæt



FORVENTET IDRIFTSÆTTELSE AF PROJEKTERNE

- Aktørernes projekter forventes at være i driftssat i perioden 2025-2030 i to bølger af idriftsættelser:
 - Bølge 1 starter i 2025 og involverer primært biogasproducenter og projekter, der forventer at få et tilskud fra statens CCS-pulje
 - Bølge 2 starter fra 2027, hvor de fleste øvrige aktører forventes at være i drift

OVERORDNEDE BETRAGTNINGER



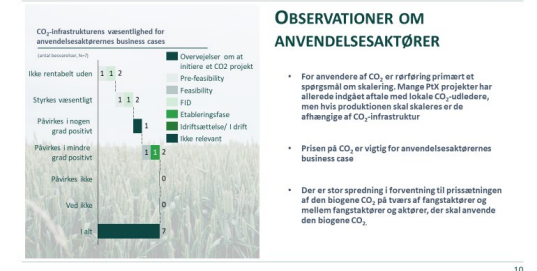
Fangstaktører

- Fangstprojekter er generelt de mest modne – særligt indenfor biogas
- Kræver markante investeringer, og reguleringsusikkerheder gør investeringen mere risikofyldt



Lageraktører

- Lagerkapacitet forventes at drive udvikling af værdikæden, samt muliggøre DK som europæisk HUB
- Fangstaktører efterspørger lagerkapacitet før de begynder at fange
- Anvendelsesaktører kan få svært ved at få større volumener uden mellemlager



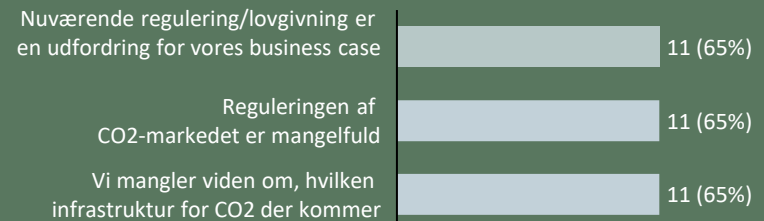
Anvendere

- For anvendere af CO₂ er rørføring et spørgsmål om skalering
- Prisen på CO₂ inkl. transport er central for anvendelsesaktørernes business case
- stor spredning i forventning til prissætningen af den biogene CO₂

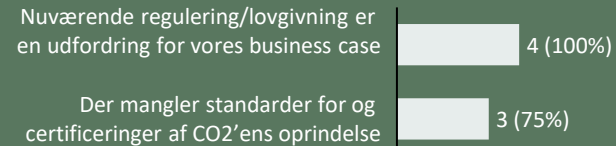
VÆSENTLIGSTE BARRIERE FOR AKTØRERNES PROJEKTER

Mest angivne barrierer på tværs af CO₂-aktører

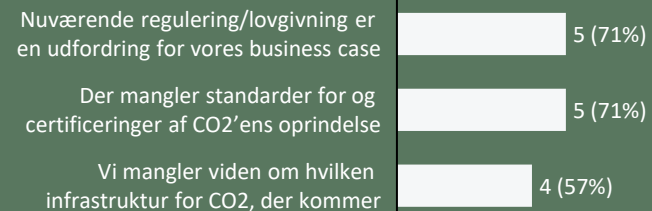
Fangstaktører (N=17)



Lagringsaktører (N=4)



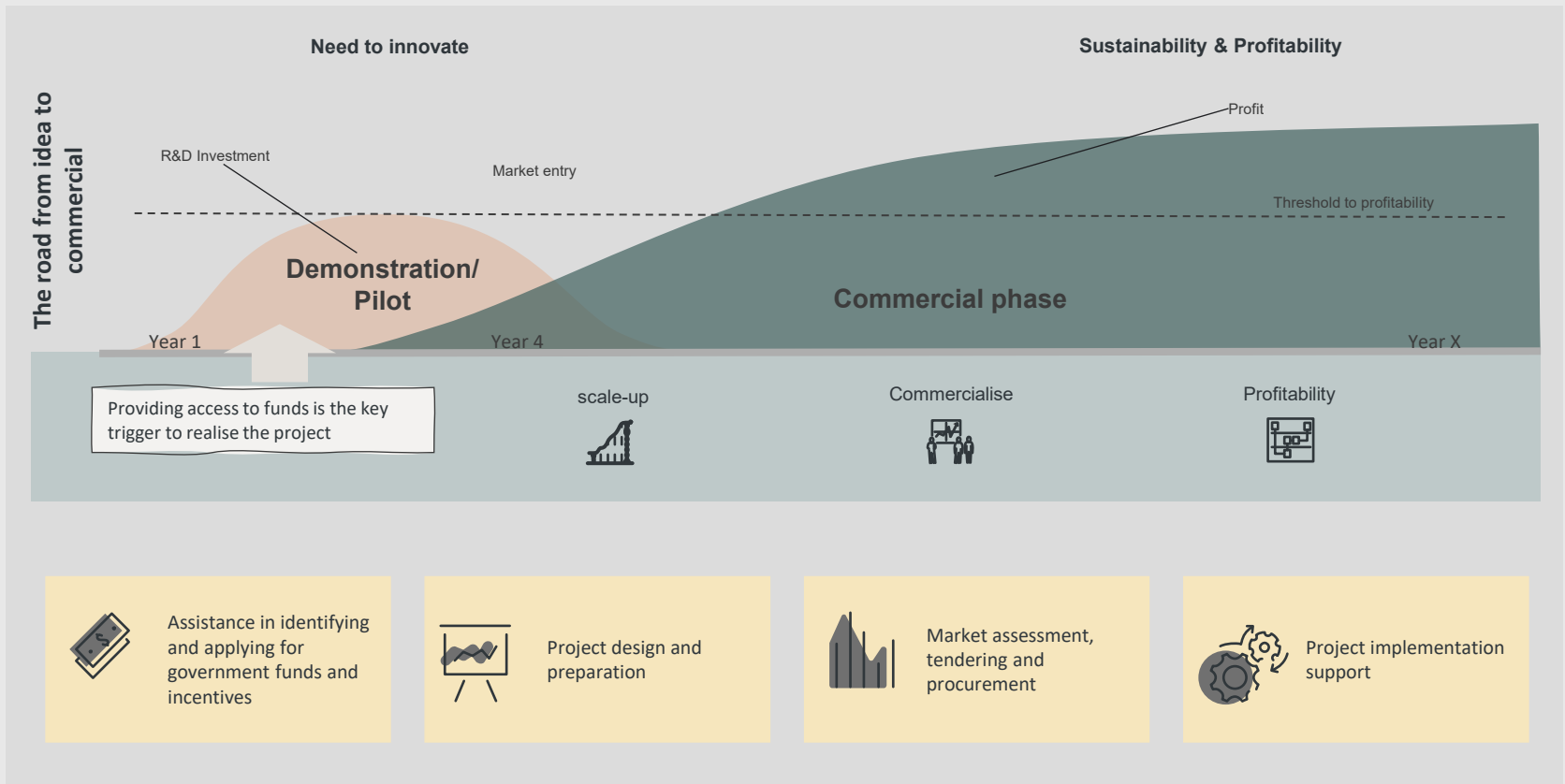
Anvendelsesaktører (N=7)



THE EU INNOVATION FUND



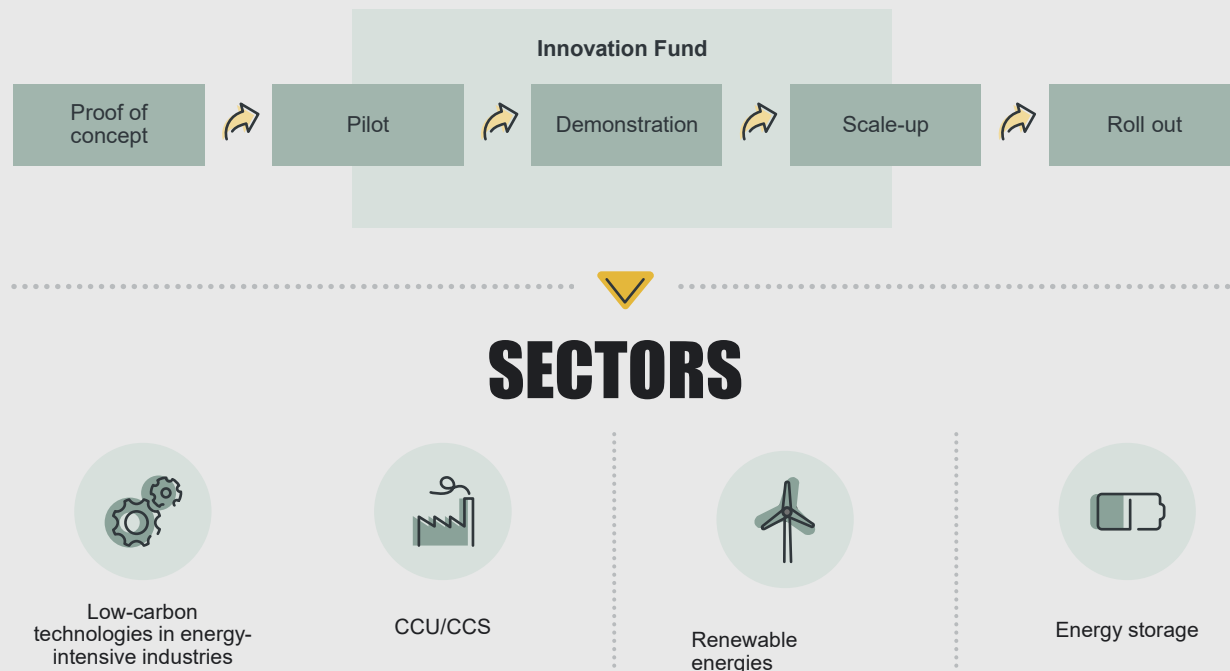
WE ARE AT A TURNING POINT WHERE THE UPSCALING OF LARGE-SCALE INNOVATIVE PROJECTS ARE THE KEY TO CLIMATE NEUTRALITY – AND IT REQUIRES FUNDING



THE EU INNOVATION FUND OFFERS EUR 40BN IN CAPEX AND OPEX SUPPORT FOR DECARBONIZATION PROJECTS.



- The EU Innovation Fund supports highly innovative technologies and industrial solutions to the market for **decarbonizing Europe**
- The focus is on funding the **first industrial implementation of innovative low-carbon technologies** that are not yet commercially available
- The scheme targets legal entities in Member States, associated countries (incl. Norway and Iceland) and third countries – as long as the project is implemented on **European territory**
- The maximum budget for this year is of **3 billion euros** for the LS call, with a 20% flexibility clause



A LOOK AT THE PROJECTS FUNDED IN THE FIRST TWO ROUNDS

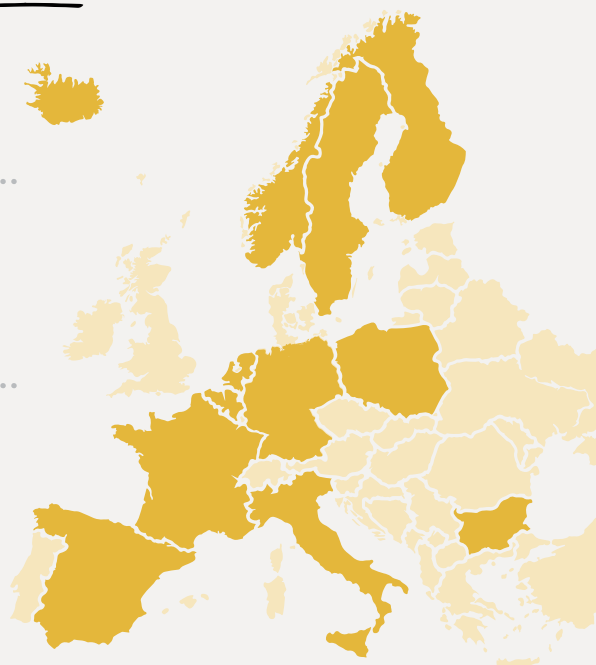


2020 and 2021 Edition

23
projects

**From 2.3Mt
to 27,6 Mt
CO₂**
avoidance potential

€ 3bn
Total distributed



Benelux
France
Italy
Sweden
Finland
Norway
Germany
Netherlands
France
Spain
Poland
Bulgaria



Key characteristics



Heterogeneity in terms of geographical coverage, sector and technology



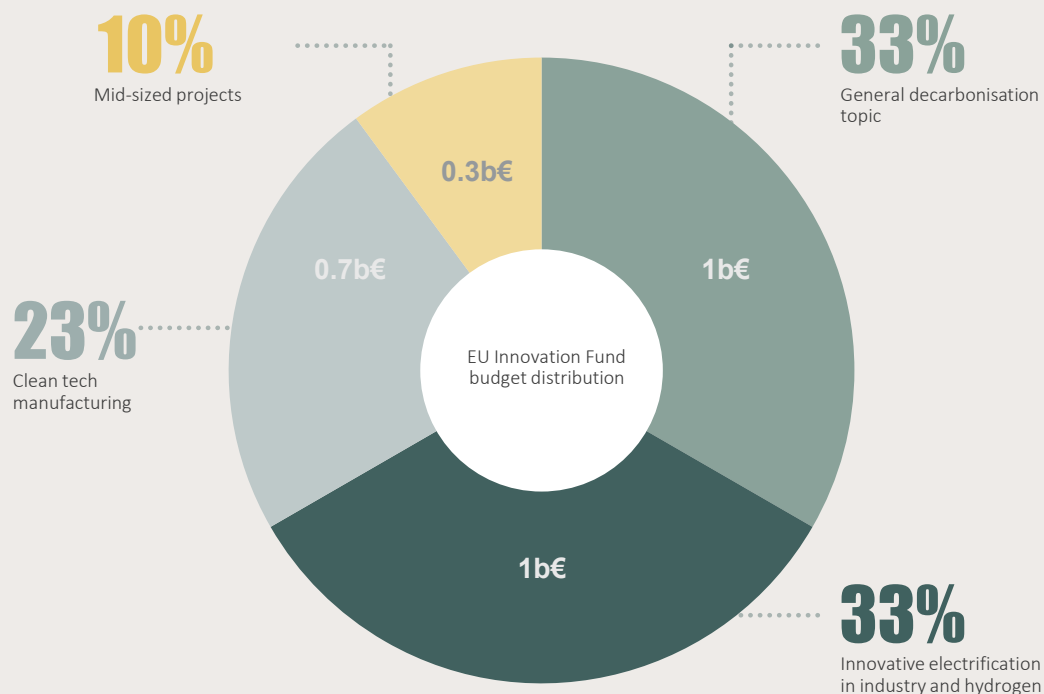
Strong representation of EILs and CCS



Several products output – multi-sided business models

	LSC1 (2021)	LSC2 (2022)
Average grant request	157,1M€	105,8M€
Average CO₂ avoidance (first ten years of operation)	10,4 MtCO _{2e}	8 MtCO _{2e}
Cost efficiency	15,1€ grant per tCO _{2e}	13,2€ grant per tCO _{2e}

For the 2023 call, the EUIF programme introduced 4 buckets







BUCKETS FOR APPLICATION

- 1 General decarbonisation
- 2 Innovative electrification in industry and hydrogen
- 3 Clean Tech Manufacturing
- 4 Mid-sized projects



AMONGST THE 21 WINNING PROJECTS FOR EMISSIONS REDUCTION, CARBON CAPTURE TECHNOLOGY IS FOUND IN 11 PROJECTS AND CCS IS APPLIED IN 6 PROJECTS.

 Sector	 # projects	 CCS project location	 Technology pathways
Hydrogen production	4	Finland	<div data-bbox="1164 408 1866 479" style="border: 1px solid orange; padding: 2px;">Hydrogen electrolysers (renewables based, + distribution/ use) + CCS</div> Waste to hydrogen
Cement	5	France, Poland, Bulgaria	<div data-bbox="1164 546 1657 604" style="border: 1px solid orange; padding: 2px;">Oxy-fuel + CCS</div> <div data-bbox="1164 604 1657 654" style="border: 1px solid orange; padding: 2px;">Oxy-fuel + CC/ H2 for methanol production</div>
Refineries	2	-	Second-generation biofuels (drop-in) & biochar from forestry waste <div data-bbox="1164 732 1676 775" style="border: 1px solid orange; padding: 2px;">Synthetic aviation fuels from RES H2 and CC</div>
Chemicals	3	-	Chemical recycling of plastics— feedstock for refinery <div data-bbox="1164 846 1676 889" style="border: 1px solid orange; padding: 2px;">Methanol production from RES H2 and CC</div> Textile fibre from pulp to replace polyester
Manufacturing of components	3	-	Li-ion Battery systems Li-ion Battery recycling Solar PV manufacturing
Renewables	1	-	Offshore wind, turbines + electrolyser
CCS infrastructure (other)	2	Belgium	<div data-bbox="1164 1182 1709 1225" style="border: 1px solid orange; padding: 2px;">Carbon mineral storage terminal (basalt) / CCS</div>
Biofuels	1	Sweden	<div data-bbox="1164 1239 1300 1282" style="border: 1px solid orange; padding: 2px;">BECCS</div>

THE SCORING DEPENDS ON THE WINDOW OF APPLICATION CHOSEN

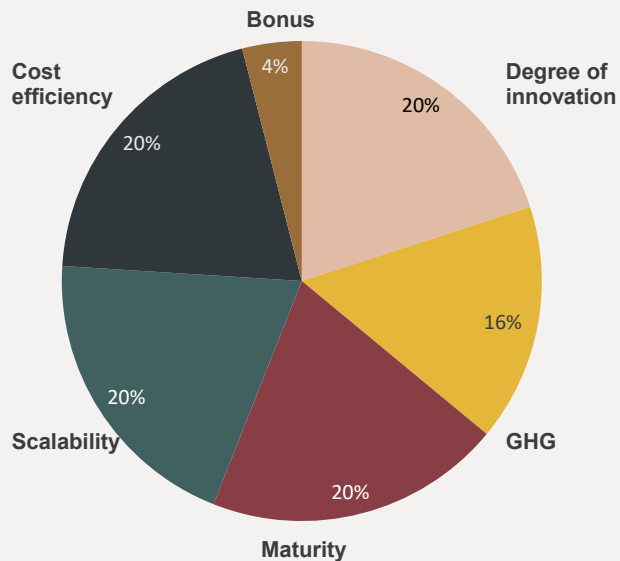


General decarbonisation topic

Degree of innovation [15 pts]	Innovation in relation to the state-of-the-art [9/15]		
GHG emissions avoidance [12 pts]	Absolute GHG [2]	Relative GHG [5]	Quality of calculations, min. requirements [3/5]
Maturity [15 pts]	Technical [3/5]	Operational [3/5]	Financial [3/5]
Scalability [9/15 pts]	Efficiency gains	Further technology or solutions deployment	Quality of KSP
Funding efficiency [15 pts]	Cost efficiency ratio [12]		Quality and credibility of cost calculation [3]
Bonus points [3 pts]	Net carbon removals [1]	Other GHG savings [1]	Additional RE [1]

Max of 75 points

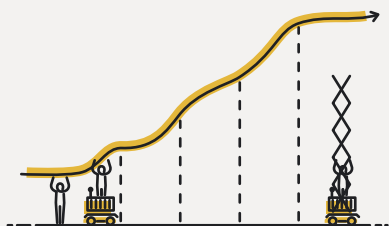
Overview of the scoring weighting for the general window



→ To be in a striking range, you need to aim to get 90% points, i.e. a score of **67 points out of 75**



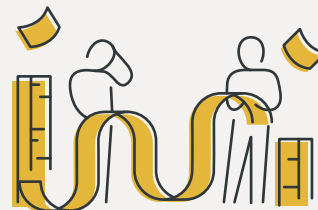
SOME TIPS TO BUILD A COMPETITIVE EDGE



Be strategic and position your project well in your relevant sector – you should be able to stand the comparison – also to other CCUS projects



Be very clear on the proposed legal and organizational structure of the project (e.g. the possibility to include or create an SPV) and how your project makes “**business sense**”



Be realistic in your assumptions and calculations and ensure consistency of claims and numbers across your documentation (Peer reviews of material is a must)



Make sure **that parties** upon which the project implementation depends are fully in line with the proposal and **provide explicit support** (e.g. permits, buy-back rights, licences, additional funding etc.)

HOW DO WE WIN EU SUPPORT FOR DANISH PROJECTS?



NEARLY HALF OF PROPOSALS PLAN TO FINANCE WITH EQUITY ONLY

PROJECTS ARE PERCEIVED AS HIGH RISK FOR FINANCCERS

About 40% of proposals submitted were planning to finance their projects entirely with equity, reflecting the challenge to find debt investors for innovative projects entailing high risks



For projects planning to raise debt, the gearing ratio (debt as a share of debt plus equity) was around 51% on average



The majority of pre-selected projects were planning to raise equity only. For those with debt in the financing mix, the average gearing ratio was 38%, reflecting a more conservative stance



Capital structures tend to differ across sectors, suggesting that risks are not uniform across industries

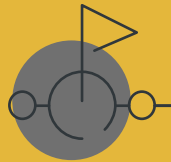


HOW CAN DANISH PROJECTS INCREASE WINNING CHANCES FOR EU FUNDING?

OUR EXPERIENCE AND BEST PRACTICES

Mature projects have better chances to win

Project strategy and grant strategy development well before call publication and submission date will increase chance of winning!



Engage with EU national contact points for advice and support.

Other member states have strong NCP support for studies support and counseling for grant application. Are we doing the right thing in Denmark?



Allocate sufficient and engaged internal and external resources early and dare to ask for third party review.

We have never seen an application won by an internal only team. EUIF application is complex and a significant resource investment case.



Advance the sourcing of capital as much as possible and determine a realistic timeline to reach financial close*

* The moment in the project development cycle where all the project and financing agreements have been signed and all the required conditions contained in them have been

met



MATCHING AND ALIGNING YOUR STRATEGIC INNOVATION PROJECTS TO RELEVANT FUNDING INSTRUMENTS IS KEY



FUNDING STRATEGY

How do we, as an organization, decide to work with funding?

Through interviews with key stakeholders in the organization (e.g., in R&D, sustainability, finance) and strategy workshops, we help you define where you want to play in the funding landscape and how you will win. This supposes to run through a cascade of decisions that together will form the basis on how you will engage with public funding to win.

Playing to win framework: "Strategy is about choices"



Going for the right projects – How do we prioritize projects

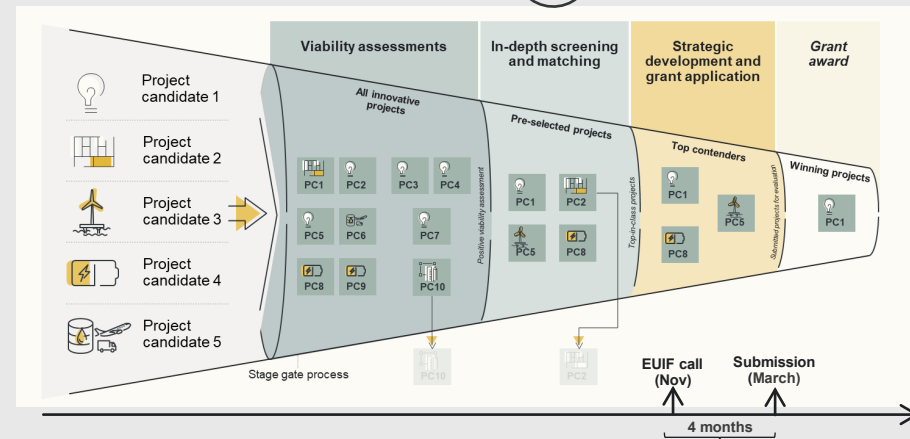
How do we know on what projects and funding opportunities to focus on?

Companies make the most out of funding by focusing only on the top project candidates for funding, and the most impactful funding instruments that suit the needs of the project.

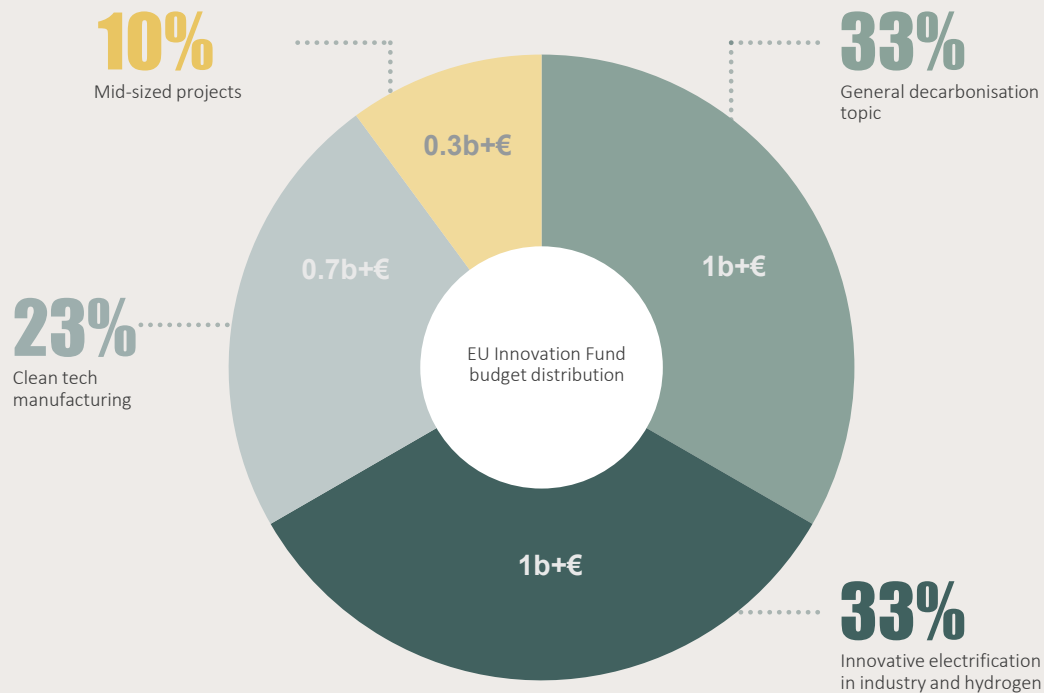
You need to identify gaps and work priorities before kick-starting the grant development work. We estimate chances of success and formulate detailed proposals to increase the outlooks.

This will make sure that you invest your resource into the right programs

Building a funding pipeline



IF YOU ARE CONSIDERING EU-IF CALL IN 2024 THIS IS WHAT YOU SHOULD EXPECT:



EU-IF 2024:

- #1 Same 4 buckets
- #2 Introduction of Carbon Contracts for Difference (CFD) for hydrogen
- #3 More than 3 billion EUR budget
- #4 More competition for mid-sized projects



CCS-Alliancen

Finansiering og risici i CCS-projekter

02.02.2023

Agenda

1. Finansiering af CCS-projekter i dag
2. Barrierer for finansiering af CCS-projekter i Danmark
3. Internationale erfaringer

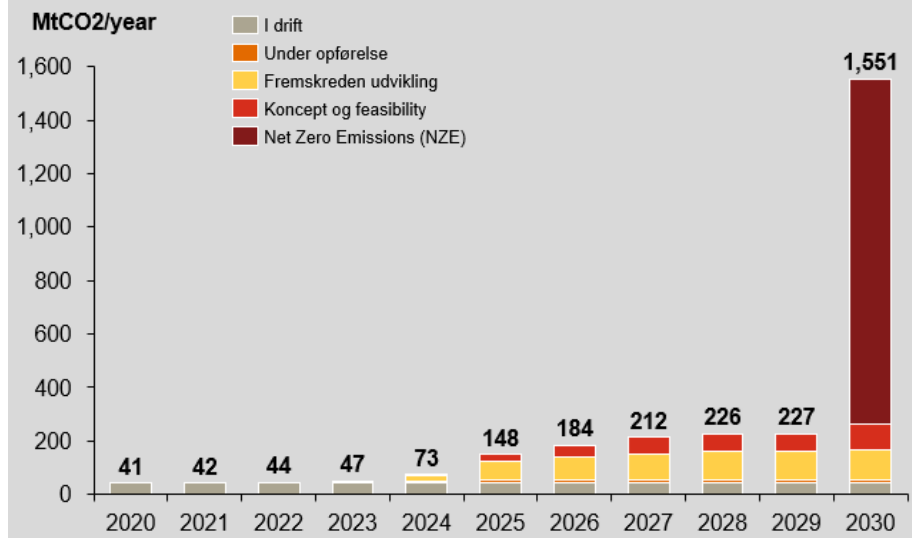


Finansiering af CCS-projekter i dag

Behovet for investering i sektoren er stort

- Udvikling af CCS-industrien kræver omfattende investeringer
- Offentlige midler er afgørende for opstart af industrien
- Behov for rette rammevilkår for private investorer
- Private investeringer stiller krav til risikoniveau og potentielle indtægskilder

Global kapacitet for CCS-projekter: Nuværende, planlagt og Net Zero-scenariet*





*Kilde: IEA, Capacity of large-scale CO2 capture projects, current and planned vs. the Net Zero Scenario, 2020-2030
<https://www.iea.org/reports/carbon-capture-utilisation-and-storage-2>


Barrierer for finansiering af CCS-projekter

Der eksisterer i dag flere barrierer og forhold, der hindrer eller besværliggør finansiering af CCS-projekter. Nedenfor præsenteres et udsnit af disse barrierer udarbejdet pba. litteraturgennemgang, interviews og PwC's viden på området.


1. CCS-projekter stiller store krav til koordination i værdikæden


 Umodent marked udfordrer kontrol med værdikæden


 Forværring af business case, tabte investeringer og annullering af projekt

 Forpligtende samarbejde og partnerskab på tværs af CCS-værdikæden


2. Manglende overblik og transparens i regulering og puljer


 Komplekse og uklare regler for offentlig finansiering


 Stort ressourcetræk til screening og ansøgning uden effekt

 Aktiv deltagelse i relevante CCS-fora og netværk samt løbende dialog


3. Søgning af mindre puljer er ressourcekrævende og står ikke altid mål med output


 Omfattende krav til ansøgning, administration og compliance


 Stort ressourceforbrug til administration og afrapportering

 Fokus på store puljer og egenfinansiering i indledende fase


4. Langsigtede forpligtelser ved CO2-lagring


 Langsigtede usikre forpligtelser ifm. lagring

 Usikkerhed om langsigtet ansvar kan forværre business case

 Styrket regulering af ansvarsplacering for lagring på meget lang sigt


5. Rammer for innovation og videndeling


 Konkurrence om puljer mindsker incitament til videns- og erfaringsdeling


 Dansk innovation og konkurrenceevne på CCS-området hæmmes

 Sikring af incitament til vidensdeling og innovation på tværs af CCS-værdikæden

6. Prissætning og snævert finansieringsfokus

 CO2-prissætning og fokus på enkelte puljer udfordrer business case hos nogle aktører

 Nedskalering af CCS-aktiviteter i branchen kan sænke udvikling af teknologi og marked

 Vedvarende arbejde med udvikling og test i lille skala trods manglende støtte



Udfordring



Risici



Muligheder

Internationale erfaringer

Flere steder i Europa er større CCS-projekter i gang, hvor tilgangen til at sikre finansieringen til projekterne varierer fra det, vi kender i Danmark. Nedenfor følger cases for finansiering af CCS-projekter i hhv. Norge og Sverige.

Case

Beskrivelse

Fakta



Norge Projekt Langskib

- Norsk fuldskala CCS-projekt lanceret i 2020 mhp. at indfange CO2 fra flere industriprocesser samt efterfølgende lagring i Nordsøen.
- Samarbejde ml. den norske stat (koordinator) og en række private aktører (varetager hhv. indfangning, transport og lagring af CO2).
- Den norske stat dækker ca. 69% af projektets estimerede investerings- og driftsomkostninger.
- Staten påtager sig en stor del af risikoen ved evt. budgetoverskridelser og forsinkelser i projektet samt ved evt. lækage ifm. lagring af Co2.

Aktører: Den norske stat, Gassnova, Norcem, Hafslund Oslo Celsio, Equinor, Shell, TotalEnergies

Finansiering: Offentlig støtte, privat egenfinansiering og øvrige puljer

Tidshorisont: 2020 - 2024

Omfatter CO2 (årligt): 0,8 mio. ton (1,5 mio. ton for fase 1 i 2024)



Sverige Industrial Leap Fund og BECCS

- Flere muligheder for svensk statsstøtte fokuseret mod hhv. forskning/udvikling og BECCS.
- Den svenske regerings "Industrial Leap Fund" har afsat midler til forskning og udvikling af CCS til flere virksomheder. Staten deler risiko med virksomhederne.
- Dertil svensk statsstøtteskema dedikeret specifikt til BECCS på 36 mia. SEK.
- Projektet "BECCS Stockholm" har modtaget midler til pilotfasen fra Industrial Leap Fund og efterfølgende € 180.000.000 fra EU Innovation Fund.

Aktører: Stockholm Exergi

Finansiering: Har modtaget funding fra Industrial Leap Fund & EU Innovation Fund

Tidshorisont: 2021-2026

Omfatter CO2 (årligt): 0,8 mio. ton

PwC's frameworks

Flere af PwC's velafprøvede frameworks kan anvendes til at styrke bl.a. risikostyring, finansiering og projektstyring i forskellige led af CCS-værdikæden.

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Eksempler på frameworks

